IN THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A wavelength division multiplexing passive optical network (WDM-PON) for performing bi-directional communication, the WDM-PON comprising:

~~two~~ at least three ~~or more~~ remote distribution nodes [[in]] between a central office and a first optical network unit, including a first remote distribution node, ~~and~~ a second remote distribution node, and a third remote distribution node, each of the first remote distribution node and the second remote distribution node is located in a physically separate location, wherein the first remote distribution node, the second remote distribution node, and the third remote distribution node are connected to each other sequentially, wherein the first remote distribution node ~~has~~ includes at least one band splitting filter configured to couple a first composite optical signal and a second composite optical signal to a first optical cable connected to the central office, wherein the first composite signal travels on the first optical cable in a first direction, and the second composite optical signal travels on the first optical cable in a second direction opposite the first direction, and configured to connect to the second remote distribution node coupled to at least two ~~or more~~ optical network units, wherein each of the first remote distribution node and the second remote distribution node ~~separates~~ are configured to separate ~~one or more wavelength channels~~at least one wavelength channel from the first composite optical signal distributed through that remote distribution node.

2. (Currently Amended) The WDM-PON of claim 1, wherein

the first remote distribution node ~~has~~ includes a series of band splitting filters configured to split the first composite optical signal that includes all of the wavelength channels in a first wavelength band into a first subset of the wavelength channels and a second subset of the wavelength channels.

3. (Currently Amended) The WDM-PON of claim 2, wherein the series of band splitting filters are ~~also~~ coupled together to create the second composite optical signal in a second wavelength band by combining a first portion of the wavelength channels in the second wavelength band and a second portion of the wavelength channels in the second wavelength band, wherein the second composite optical signal travels in the opposite direction of the first composite optical signal and occupies a different wavelength band than the first composite optical signal.

4. (Currently Amended) The WDM-PON of claim 1, wherein the second remote distribution node ~~contains~~ includes a first multiplexer/demultiplexer to receive a first subset of the wavelength channels in the first composite optical signal from the first remote distribution node and to send a first portion of wavelength channels in the second composite optical signal to the first remote distribution node, wherein the second composite optical signal occupies a different wavelength band than the first composite optical signal.

5. (Currently Amended) The WDM-PON of claim 4, wherein the second remote distribution node ~~also contains~~ includes a second multiplexer/demultiplexer to receive a second subset of the wavelength channels in the first composite optical signal from the first remote

distribution node and to send a second subset of wavelength channels from the second wavelength band to the first remote distribution node.

6. (Previously Presented) The WDM-PON of claim 1, wherein the first remote distribution node has an optical interleaver configured to split the first composite optical signal in a first wavelength band into a first portion consisting of odd numbered wavelength channels and a second portion consisting of odd numbered wavelength channels.

7. (Previously Presented) The WDM-PON of claim 6, wherein the optical interleaver is also configured to create the second composite optical signal in a second wavelength band from a combination of a first portion of wavelength channels in the second wavelength band and a second portion of wavelength channels in the second wavelength band.

8. (Currently Amended) The WDM-PON of claim 1, wherein the first direction is a downstream direction from the central office, and the second direction is upstream direction to the central office, and wherein the first remote distribution node includes an optical interleaver configured to receive the first composite optical signal that travels in the downstream direction from the central office, configured to ~~divides~~ divide the first composite optical signal into odd wavelength channel signals and even wavelength channel signals in order to output the odd and even wavelength signals to corresponding multiplexer/demultiplexers, and configured to ~~receives~~ receive the odd and even wavelength channel signals from the corresponding multiplexer/demultiplexers in order to combine the odd wavelength channel signals with the even wavelength channel signals.

9. (Currently Amended) The WDM-PON of claim 6, wherein the second remote distribution node ~~contains~~ includes a first multiplexer/demultiplexer to receive the odd numbered wavelength channels from the first remote distribution node and to send the first portion of the wavelength channels in a second wavelength band to the first remote distribution node.

10. (Currently Amended) The WDM-PON of claim 9, wherein the second remote distribution node ~~also containing~~ includes a second multiplexer/demultiplexer to receive the even numbered wavelength channels of the first wavelength band from the first remote distribution node and to send a portion of the second wavelength band to the first remote distribution node.

11. (Currently Amended) The WDM-PON of claim 1, wherein the first remote distribution node has a multiplexer/demultiplexer coupled to at least two ~~or more~~ band splitting filters configured to split the first composite optical signal that includes all of the wavelength channels in a first wavelength band into a first subset of wavelength channels and a second subset of wavelength channels.

12. (Currently Amended) The WDM-PON of claim 11, wherein the second remote distribution node ~~contains~~ includes a first multiplexer/demultiplexer to receive the first subset of wavelength channels from the first remote distribution node, a second multiplexer/demultiplexer to receive the second subset of wavelength channels from the first remote distribution node.

13. (Currently Amended) The WDM-PON of claim 12, wherein the second remote distribution node is configured to send a first through fourth portions of the wavelength channels in a second wavelength band to the second multiplexer/demultiplexer in the first remote distribution node via the band splitting filters, wherein the second multiplexer/demultiplexer is configured to combine the wavelength channels from the first through the fourth portions.

14. (Previously Presented) The WDM-PON of claim 11, wherein the at least one band splitting filter is further configured to separate the first composite optical signal and the second composite optical signal.

15. (Currently Amended) The WDM-PON of claim 1, wherein the first remote distribution node includes a first multiplexer/demultiplexer and a second remote distribution node includes an add drop module, wherein a first drop module ~~removes~~ is configured to remove a wavelength channel from the first composite optical signal that includes all of the wavelength channels and the first multiplexer/demultiplexer ~~distributes~~ is configured distribute at least two ~~or more~~ of the wavelength channels in the first composite optical signal.

16. (Currently Amended) The WDM-PON of claim 1, further comprising:

at least two ~~or more~~ add/drop modules coupled to the first optical cable from the central office to the first remote distribution node containing a first multiplexer/demultiplexer, wherein the add/drop modules to remove wavelength channels from the first composite optical signal prior to the first multiplexer/demultiplexer.

17. (Currently Amended) A method, comprising:

separating a first composite optical signal that includes all of the wavelength channels in a first wavelength band in a transmission path between a central office and a most distant optical network unit into at least ~~two~~ three ~~or more~~ smaller groups consisting of subsets of the wavelength channels; and

generating the at least ~~two~~ three ~~or more~~ smaller groups consisting of subsets of the wavelength channels by sequentially separating the first composite optical signal along the transmission path at least ~~two~~ three ~~or more~~ times by a first remote distribution node connected sequentially to a second remote distribution node which is connected sequentially to a third remote distribution node via at least one band splitting filter that is configured to couple the first composite optical signal and a second composite optical signal to a first optical cable connected to the central office, wherein the first composite signal travels on the first optical cable in a first direction, and the second composite optical signal travels on the first optical cable in a second direction opposite the first direction.

18. (Previously Presented) The method of claim 17, further comprising:

separating the first composite optical signal into a first subset that includes even numbered wavelength channels and a second subset that includes odd numbered wavelength channels.

19. (Currently Amended) The method of claim 17, further comprising:

combining at least two ~~or more~~ optical signals in a second wavelength band along the transmission path, each optical signal with at least one ~~or more~~ wavelength ~~channels~~channel, wherein the second composite optical signal travels in an opposite direction of the first composite optical signal and occupies a different wavelength band than the first composite optical signal.

20. (Currently Amended) An apparatus, comprising:

a first optical network unit including an optical receiver and an optical transmitter; and

means for separating a first composite optical signal that includes all of the wavelength channels in a first wavelength band into at least ~~two~~ three ~~or more~~ smaller groups consisting of subsets of the wavelength channels in a transmission path between a central office and a first optical network unit, wherein the first composite optical signal is sequentially separated along the transmission path at least ~~two~~ three ~~or more~~ times, wherein the means for separating includes a first remote distribution node connected sequentially to a second remote distribution node which is connected sequentially to a third distribution node via at least one band splitting filter to generate the at least ~~two~~ three ~~or more~~ smaller groups consisting of subsets of the wavelength channels, wherein the at least one band splitting filter is configured to couple the first composite optical signal and a second composite optical signal to a first optical cable connected to the central office, wherein the first composite signal is transmitted ~~travels~~ on the first optical cable in a first direction, and the second composite optical signal is transmitted ~~travels~~ on the first optical cable in a second direction opposite the first direction.

21. (Original) The apparatus of claim 20, further comprising:

means for separating the composite optical signal into a first subset that includes even numbered wavelength channels and a second subset that includes odd numbered wavelength channels.

22. (Currently Amended) The apparatus of claim 20, further comprising:

means for combining at least two ~~or more~~ optical signals in a second wavelength band along the transmission path, each optical signal with at least one ~~or more~~ wavelength channels, wherein a second composite optical signal is transmitted ~~travels~~ in an opposite direction of the first composite optical signal and has~~occupies~~ a different wavelength band than the first composite optical signal.